IN THE CLAIMS

Please cancel claim 13 and further amend the claims to read as indicated herein.

1. (currently amended) A method ~~for providing an optical measuring signal to an optical component to be measured, comprising the step of~~, comprising:

~~broadening the spectral density of the optical signal until relevant non-linear effects in the optical component occur, at most, by~~

combining ~~a plurality of initial optical signals~~ a first optical signal and a second optical signal to create ~~the optical signal~~ an optical time domain reflectometer (OTDR) test signal.

2. (currently amended) The method of claim 1, wherein ~~the initial~~ said first and second optical signals have different center wavelengths.

3. (currently amended) The method of ~~the claims 1, further comprising the steps of: using~~ claim 1,

wherein said first and second optical signals are two of a plurality of between about 4 to 11 ~~initial~~ optical signals, and

wherein said combining comprises combining said plurality of optical signals to create said OTDR test signal.

4. (currently amended) The method of claim 1, ~~further comprising the step of:~~

~~adjusting a spacing between the center wavelengths of any two of the initial optical signals to be not equal to each other~~

wherein said combining further comprises combining a third optical signal with said first and second optical signals to create said OTDR test signal,

wherein said first optical signal has a first center wavelength, said second optical signal has a second center wavelength, and said third optical signal has a third center wavelength,

wherein said first and second center wavelengths are separated by a first spacing, said first and third center wavelengths are separated by a second spacing, and said second and third

wavelengths are separated by a third spacing, and

wherein each of said first, second and third spacings are different from one another.

5. (currently amended) The method of claim 1, ~~further comprising the step of:~~

wherein said first optical signal has a first optical power, and said second optical signal has a second optical power, and

wherein said~~adjusting the initial optical signals to have approximately the same~~ first optical power is approximately equal to said second optical power.

6. (currently amended) The method of claim 1, further comprising ~~the step of~~:

~~increasing the power of the optical signal until relevant non-linear effects in the optical component occur, at most, by increasing the power of the initial optical signals until relevant non-linear effects in the optical component occur, at most~~

increasing power of at least one of said first and second optical signals until said OTDR test signal has a relevant non-linear effect.

7. (currently amended) The method of claim 1, ~~further comprising the step of:~~

~~adjusting the spacing between the center wavelength of the initial optical signal having the smallest center wavelength and the initial optical signal having the biggest center wavelength to be not greater than about 20 nanometer~~

wherein said first and second optical signals are two of a plurality of optical signals that includes an optical signal having a shortest center wavelength and an optical signal having a longest center wavelength, and

wherein said shortest center wavelength and said longest center wavelength have a difference of not greater than about 20 nanometers.

8. (currently amended) The method of claim 1, ~~further comprising the steps of:~~

~~combining the initial optical signals by coupling them together, the coupling having coupling efficiencies~~

wherein said combining comprises coupling said first and second optical signals together, and

where:

$C > 1/N$, and

$P_{tot} = N \times P_{ini} \times C$,

where:

C = coupling efficiency,

N = number of optical signals being coupled together,

P_{tot} = total power output of the combined optical signals, and

P_{ini} = output power of a single optical signal

~~preferably approximately 1, if $P_{tot} = N \times P_{ini} \times C$, P_{tot} being the total output of the combined initial optical signals, P_{ini} being the output of a single initial optical signal, N being the number of the initial optical signals~~.

9. (currently amended) A software program or product~~, preferably~~ stored on a data carrier, for executing the method of claim 1, when run on a data processing system~~such as a computer~~.

10. (currently amended) A method~~for performing an optical time domain reflectometer - OTDR - measurement, comprising the steps of~~ comprising:

~~providing an optical measuring signal to an optical component to be measured by broadening the spectral density of the optical signal until relevant non-linear effects in the optical component occur, at most, by~~

combining~~a plurality of initial optical signals~~ a first optical signal and a second optical signal to create~~the optical signal,~~ an optical time domain reflectometer (OTDR) test signal;

providing said OTDR signal to an optical component, wherein said optical component, in response to said OTDR signal, produces a response signal; and

detecting~~a~~ said response signal~~in response to the optical measuring signal provided to an optical component~~.

11. (currently amended) An apparatus~~for providing an optical signal to an optical component,~~ comprising:

~~a broadening device adapted for broadening the spectral density of the optical signal until~~

~~relevant non-linear effects in the optical component occur, at most, by~~

a combiner for combining ~~a plurality of initial optical signals~~ a first optical signal and a second optical signal to create ~~the optical signal~~ an optical time domain reflectometer (OTDR) test signal.

12. (currently amended) The apparatus of claim 11, further comprising:

~~at least two laser sources to provide at least two initial optical signals to create the optical signal, the initial optical signals having different center wavelengths~~

a first laser source to provide said first optical signal; and

a second laser source to provide said second optical signal,

wherein said first optical signal has a first center wavelength, and said second optical signal has a second center wavelength, and

wherein said first and second wavelengths are different from one another.

13. (canceled)

14. (currently amended) The apparatus of claim 11, ~~further comprising:~~

~~a combiner having coupling efficiencies $C > 1/N$, preferably approximately 1, if $P_{tot} = N \times P_{ini} \times C$, P_{tot} being the total output of the combined initial optical signals, P_{ini} being the output of a single initial optical signal, N being the number of the initial optical signals~~

wherein said combiner comprises a coupler,

where:

$C > 1/N$, and

$P_{tot} = N \times P_{ini} \times C$,

where:

C = coupling efficiency,

N = number of optical signals being coupled together,

P_{tot} = total power output of the combined optical signals, and

P_{ini} = output power of a single optical signal.

15. (currently amended) An optical time domain reflectometer ~~OTDR~~ (OTDR), comprising:

an apparatus~~, adapted for providing an optical measuring signal to an optical component to be measured, comprising a broadening device adapted for broadening the spectral density of the optical signal until relevant non-linear effects in the optical component occur, at most, by combining a plurality of initial optical signals~~ for combining a first optical signal and a second optical signal to create ~~the optical~~ an OTDR test signal, and

a detector ~~adapted~~ for detecting a response signal ~~in response to the optical measuring signal provided to~~ from an optical component that produces said response signal in response to said OTDR test signal.

Please add the following claims, newly numbered as claims 16 – 19.

16. (new) The method of claim 1,

wherein said first optical signal has a first center wavelength, and said second optical signal has a second center wavelength,

wherein said first and second center wavelengths are different from one another by greater than 0 nm and less than or equal to about 20 nm, and

wherein said OTDR test signal has a spectral distribution of less than or equal to about 20nm.

17. (new) The method of claim 10,

wherein said first optical signal has a first center wavelength, and said second optical signal has a second center wavelength,

wherein said first and second center wavelengths are different from one another by greater than 0 nm and less than or equal to about 20 nm, and

wherein said OTDR test signal has a spectral distribution of less than or equal to about 20nm.

18. (new) The aparatus of claim 11,

wherein said first optical signal has a first center wavelength, and said second optical signal has a second center wavelength,

wherein said first and second center wavelengths are different from one another by greater than 0 nm and less than or equal to about 20 nm, and

wherein said OTDR test signal has a spectral distribution of less than or equal to about 20nm.

19. (new) The OTDR of claim 15,

wherein said first optical signal has a first center wavelength, and said second optical signal has a second center wavelength,

wherein said first and second center wavelengths are different from one another by greater than 0 nm and less than or equal to about 20 nm, and

wherein said OTDR test signal has a spectral distribution of less than or equal to about 20nm.